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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,157	04/08/2004	Mary Ellen Armitage	9539-000058/COA	9193

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EXAMINER

COMPTON, ERIC B

ART UNIT PAPER NUMBER

3726

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,157

Applicant(s)

ARMITAGE ET AL.

Examiner

Eric B. Compton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention II, claims 8-25 in the reply filed on August 16, 2004 is acknowledged. Claims 1-7 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. 2,017,609 to Sparrow view of U.S. Pat. 3,659,434 to Wolfe.

Sparrow discloses a method of balancing tubular shafts comprising, locating plugs into the shaft at positions "to counter-act the out-of balance effects." Col. 2, lines 5-6. The plugs are press fit to the location of the imbalances. "Thus, by means of the invention, the plugs being inserted just at those places where the weight has to be increased, the out-of-balance effects can be reduced in a very simple manner." Col. 2, lines 18-21. The reference notes that uniform plugs are used having holes drilled in them. See Col. 2, lines 8-16. Drilling holes changes the mass of the plugs. "[T]he plugs

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are ... formed with eccentric centres of mass, as necessary, to counteract the out-of balance effects." Col. 2, lines 3-6.

However, it is not clear from the reference whether or not the inserts are non-identical.

Wolfe discloses a method for balancing tubular shafts comprises adding weights at locations, i.e., anti-nodes, needed to balance the shaft. "The location or locations on the tubular shafting where additional weight is required to balance the shafting kinetically and dynamically is determined." Col. 1, lines 40-42. "The tubular shafting 34 is then positioned on a suitable machine to determine both the kinetic and dynamic unbalance of the tubular shafting 34 and ***the exact location where additional weight is required on the shafting 34 to provide both a kinetically and dynamically balanced shaft.***" Col. 3, lines 21-25 (emphasis added). "A ***predetermined amount*** of molten lead indicated by the amount of unbalance is prepared by melting suitable, ***carefully weighed quantities of lead*** and the molten lead is poured through the opening 40 into the cavity 16 and passageway 42." Col. 3, lines 45-47 (emphasis added). Thus it is known to provide the exact weight at the specific location(s) on a shaft to prevent unbalance.

Regarding claims 8, 15, 19, and 24, it would have been obvious to one having ordinary skill in the art, to have press-fit non-identical inserts (having specific weight) at the locations of unbalance, i.e., anti-node in the shafts of Sparrow, in light of the teachings of Wolfe, in order "to balance the shafting kinetically and dynamically." Col. 1, lines 41-42.

Regarding claims 9, 10, and 22-23, the positions along the shaft where unbalance is measured may be considered anti-nodes in as much as Applicant contemplates.

Regarding claims 12, 17, and 21, Sparrow discloses press-fitting the plugs into the shaft.

Regarding claims 11, 16, 20, and 25, the plugs of Wolfe are different in weight (mass * gravity).

Regarding claim 13, 14, and 18, in Sparrow the plugs are initially uniform in design and in Wolfe the inserts are formed from like material, e.g., lead. These can be considered similar plugs.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (703) 305-0240. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter B. Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Eric Compton', with a long horizontal flourish extending to the right.

Eric Compton
Patent Examiner